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MEMORANDUM FOR DISTRIBUTION

Subj: SMART CARD READER REQUIREMENT

Ref: (a) DON CIO memo of 30 Apr 02, Subj: Information Technology-related Procurements with Smart Card Readers

Encl: (1) Common Access Card (CAC) Release 1.0 Reader Specifications, Version 1.0, 25 Sep 00

The Department of the Navy (DON) is deploying smart card technology in the form of DoD's Common Access Card (CAC). Every eligible person within the DON will receive a CAC containing Public Key Infrastructure digital credentials to enable the signing of electronic mail, encryption of documents, access to secure web-services, and access to unclassified network services/NIPRNET. Therefore, we must ensure that smart card reader hardware is successfully deployed to support this effort.

Reference (a) established DON policy that all desktop/laptop computers (connecting to unclassified network services/NIPRNET) shall include smart card readers that comply with enclosure (1). Accordingly, effective immediately, all new requirements for such computers, however acquired, must include smart card readers.

Questions concerning this memorandum should be directed to James Ermerins, Ermerins.James@hq.navy.mil, (703) 602-2322.

Paul A. Schneider
Principal Deputy

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DEPARTMENT OF THE NAVY
CHIEF INFORMATION OFFICER
1000 NAVY PENTAGON
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30 APRIL 2002

MEMORANDUM FOR DISTRIBUTION

Subj: INFORMATION TECHNOLOGY-RELATED PROCUREMENTS WITH SMART CARD READERS

Ref: (a) Under Secretary of Defense (Personnel and Readiness)/Department Of Defense (DoD) CIO Memo of 16 Jan 01, Subj: Common Access Card
(b) DoD CIO memo of 12 Aug 01, Subj: Department of Defense Public Key Infrastructure (PKI)

Encl: (1) Common Access Card (CAC) Reader Specification, Version 1.0, 25 Sep 00

In accordance with references (a) and (b), the entire Department of Defense is deploying smart card technology in the form of the DoD Common Access Card (CAC). The CAC is our principal Public Key Infrastructure (PKI) token and every eligible person within the Department of the Navy (DON) will receive a CAC containing digital credentials to enable the signing of electronic mail, encrypting of documents, accessing secure web-services, and accessing unclassified network services/NIPRNET. The Department must ensure that smart card readers are successfully deployed to support this effort.

The Navy Marine Corps Intranet (NMCI) is the Department's primary path for establishing the infrastructure to support PKI and smart card technologies ashore. As NMCI deploys, each NMCI workstation will include a smart card reader and necessary software enhancements. However, there may be instances when the Department will procure desktop/laptop computers to support initiatives outside of NMCI. Therefore, it is DON policy that all DON desktop/laptop computers (connecting to unclassified network services/NIPRNET) shall include smart card readers compliant with enclosure (1).

a. Effective immediately, all newly generated requirements/ specifications for DON desktop/laptop computers (connecting to unclassified network services/NIPRNET) shall be written to meet this policy.

Subj: INFORMATION TECHNOLOGY-RELATED PROCUREMENTS WITH SMART CARD READERS

b. Within 30 days, all existing requirements/specifications for DON desktop/laptop computers (connecting to unclassified network services/NIPRNET) shall be revised to include requirements for smart card readers compliant with Enclosure (1). These revised requirements/specifications must then be invoked whenever desktop or laptop computers connecting to unclassified network services are subsequently acquired.

c. Within 120 days of this memorandum, CNO(N6) and HQMC(C4) have agreed to provide their strategy for deploying smart card readers and middleware for DON desktop/laptop computers (connecting to unclassified network services/NIPRNET) that will not be procured under the NMCI contract.

My office shall review, coordinate, and maintain the smart card reader specification. The DON CIO point of contact is Mr. Robert Carey, (703) 607-3420, carey.rob@hq.navy.mil.

D.E. Porter

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Common Access Card (CAC) Release 1.0 Reader Specifications

Version 1.0

September 25, 2000

Prepared by: Access Card Office (ACO)

Table of Contents

1. Purpose:

The Deputy Secretary of Defense (DEPSECDEF) memorandum of November 10, 1999, regarding the Common Access Card (CAC), discussed Department-wide usage of the CAC for identification, physical access, and as the primary carrier of DoD Public Key Infrastructure (PKI) credentials. The CAC also has additional functionality for Component-specific requirements.

PKI and multiple applications place stringent requirements on smart card readers. As PKI is supported by the overall CAC, the CAC and smart card readers are only a subset of the overall DoD PKI Architecture for Class 3 and future PKI requirements. This document will outline the specifications for initial procurement of smart card readers to support, at a minimum, the DoD PKI Class 3 Architecture.

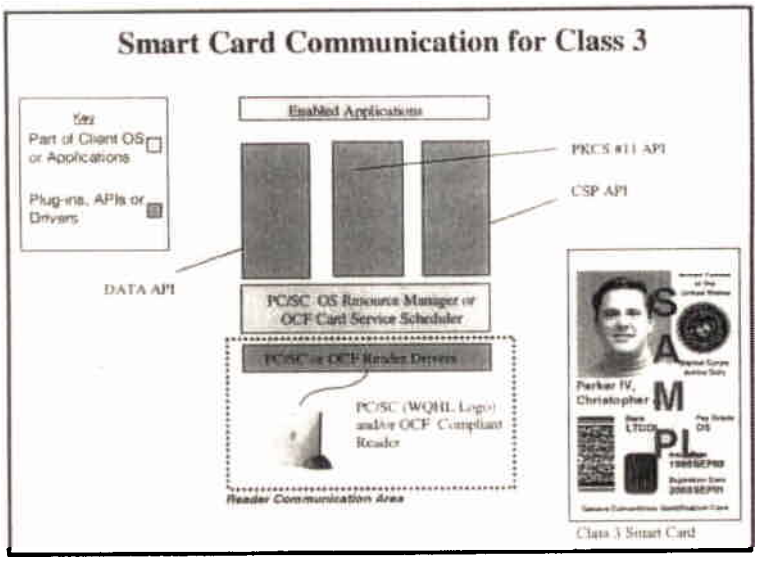
For more detailed discussions and analysis of the smart card reader specification, please refer to "Smart Card Reader Interoperability: Operation in DoD PKI Class 3 and Target Class 4 Architecture version 1.0" white paper prepared by the DoD PKI's Target Token Work Group.

2. DoD CAC for DoD PKI Class 3 Architecture:

The CAC and the respective reader will be two elements of the overall CAC architecture. This section will discuss smart card reader topics associated with the CAC architecture to include all smart card enabled client workstations and RAPIDS workstations. It is anticipated that other devices (e.g. mobile phones, personal digital assistants, etc.) may also interact with the CAC. Those interfaces and interaction are not discussed in this document.

Figure 1.0 illustrates the smart card communication path for the CAC architecture.

Figure 1.0: Illustration of Smart Card Communication for CAC Architecture



2.1. Guiding Principles

For the DoD PKI Class 3 CAC reader specification, the below guiding principles or basic assumptions apply.

- The DoD PKI Target Class 4 architecture will not obsolete the Class 3 Architecture.
- The DoD PKI Target Class 4 smart card requirements will not obsolete Class 3 smart card and/or reader requirements.
- The DoD PKI Class 3 smart card and reader requirements will evolve to the Target Class 4 smart card and reader requirements over time without major infrastructure obsolescence.

2.2. CAC/DoD PKI Class 3 Reader Specifications

Smart card readers will be needed to interact with the smart card in a Microsoft Windows 95, 98, NT 4.0 or higher; UNIX; LINUX; Macintosh, and JavaOS environments. All smart card readers shall minimally be PC/SC (WHQL logoed) certified. Additionally, all smart card readers destined for UNIX, LINUX, Macintosh, and JavaOS environments shall provide PC/SC (ie M.U.S.C.L.E.) and OCF complaint reader drivers and/or components.

The following are the reader specifications for the potential hardware interfaces (embedded in workstation, RS232 interface, USB 1.0 interface, and PCMCIA interface) to client workstations. CINCs/Services/Agencies may

desire additional features or functions, but ALL CAC readers must minimally comply with the below specifications.

Specifications	***Reader Type***			
	Workstation Embedded	**9 pin RS-232 Serial Interface**	**USB 1.0 Port Interface**	**PCMIA Interface**
General Specifications				
Standards	All shall be PC/SC (WHQL Logo) certified. Additionally, those readers destined for workstations other than Wintel shall provide PC/SC (M.U.S.C.L.E) certified and OCF compliant reader drivers	All shall be PC/SC (WHQL Logo) certified. Additionally, those readers destined for workstations other than Wintel shall provide PC/SC (M.U.S.C.L.E) certified and OCF compliant reader drivers	All shall be PC/SC (WHQL Logo) certified. Additionally, those readers destined for workstations other than Wintel shall provide PC/SC (M.U.S.C.L.E) certified and OCF compliant reader drivers	All shall be PC/SC (WHQL Logo) certified. Additionally, those readers destined for workstations other than Wintel shall provide PC/SC (M.U.S.C.L.E) certified and OCF compliant reader drivers
LED	1, w/dual displaying power-on and read/write	1, w/dual displaying power-on and read/write	1, w/dual displaying power-on and read/write	N/A
Protocol	T=1 and T=0	T=1 and T=0	T=1 and T=0	T=1 and T=0
Frequency	1-5 MHz	1-5 MHz	1-5 MHz	1-5 MHz
Software Updates provided (drivers and protocols)	Yes	Yes	Yes	Yes
Cable	N/A	min. 1-3 meter	min. 1-3 meter	N/A
PCMCIA	N/A	N/A	N/A	Type II Interface
Protocol Management / Communication				
Data Exchange Rate (smart card to reader)	9600 bps to 115,200 bps or greater	9600 bps to 115,200 bps or greater	9600 bps to 115,200 bps or greater	9600 bps to 115,200 bps or greater
Power				
Source	N/A	via PS/2 or DIN5 port	USB 1.0	N/A
Voltage	3V and 5V	3V and 5V	3V and 5V	3V and 5V
Specifications	ISO 7816, EMV(5V,60mA)	ISO 7816, EMV(5V,60mA)	ISO 7816, EMV(5V,60mA)	ISO 7816, EMV(5V,60mA)
Physical				
Insertion Cycles	min. 100,000	min. 100,000	min. 100,000	min. 100,000
Chip Location	ISO 7816	ISO 7816	ISO 7816	ISO 7816
Additonal Desirable but not Required Features				
Casing	N/A	Supports vertical	Supports vertical	N/A
Short Circuit Detection	Yes	Yes	Yes	Yes